DEZELIC, M.; NIKOLIN, B.

Ser complex compounds of nicotine, and their insecticidal action.
Glasnik hemicara 12:45-52 '63.

1. Laboratory of Organic Chemistry and Biochemistry, Chemical Institute, University of Sarajevo, Sarajevo.

DEZELIC, M.; GRUJIC-VASIC, J.; RAMIC, S.

Composition of nicotinic compounds with aliphatic acids determined by the stalagonometric method. Glasnik hemicara 12:53-58 '63.

1. Laboratory of Organic Chemistry and Biochemistry, Chemical Institute, University of Sarajevo, Sarajevo (for Dezelic and Grujic-Vasic). 2. Chemical Institute of the Faculty of Medicine in Sarajevo (for Ramic).

BOBROVIC, S.; [redacted], M.; [illegible]VIC, V.

Condensation products of pyrrolizanones with aldehydes. Glasnik hemijskog [illegible] 28:111-115 '63.

1. The Lord Institute of the Faculty of Medicine in Zagreb

DEZELIĆ, M.; TRKOVNIK, M.; IVANOVIĆ, R.; GRUBIŠIĆ, J.

Some derivatives of 3-amino-4-hydroxycoumarin. Glasnik hemicara 12: 127-129 '63.

1. Laboratory of Organic Chemistry and Biochemistry, Chemical Institute, University of Sarajevo, Sarajevo.

DEZELIC, Mladen, dr. redovni profesor (Sarajevo, Jug Bogdanova 7); REPAS, Anica, docent

Glucosides in the bark and leaves of Populus tremula. Tehnika Jug 19 no.6:Suppl: Hémindustrija 18 no.6:1124-1126 Je '64.

1. Faculty of Natural Sciences and Mathematics, University of Sarajevo, Sarajevo.

YUGOSLAVIA

NIKOLIN, B., BOSKOVIC, B., and DEZELIC, M., Institutes of Chemistry and Pharmacology, Medical Faculty, Sarajevo

"Acute Toxicity of Some Salts of Nicotine, Pyridine, and N-Methylpyrrolidine"

Zagreb, Arhiv za Higijenu Rada i Toksikologiju, Vol 17, No 3, 1966, pp 303-308

Abstract: LD_{50} of the salts of nicotine with gallic, 2,5-dihydroxybenzoic, oxalic, p-aminosalicylic, and p-nitrobenzoic acid, of N-methylpyrrolidine with gallic, 2,5-dihydroxybenzoic, oxalic, and p-nitrobenzoic acid, and also of pyridine oxalate and p-nitrobenzoate was determined in tests on mice in which intraperitoneal injection of the salts was carried out. Some of the salts tested had been newly synthesized at the Institute of Chemistry of the Medical Faculty at Sarajevo. It had been established that some organic acid salts of nicotine have insecticidal activity and are more resistant to oxidation than nicotine base. LD_{50} of nicotine gallate, 2,5-dihydroxybenzoate, oxalate, and p-aminosalicylate was lower than that of nicotine base, while LD_{50} of nicotine p-nitrobenzoate was higher. When injected subcutaneously into mice before administration of nicotine 2,5-dihydroxybenzoate, N-methylpyrrolidine gallate exerted a certain protective effect against poisoning with the nicotine salt. Tables, 12 references (6 Yugoslav, 6 Western). English summary. Manuscript received 6 Jul 65

1/1

ZEBEC, M.; DEZELIC, Gj.; DEZELIC, N.; KRATOHVIL, J.P.

Physicochemical studies of dextran. I. Characterization of clinical samples. Croat chem acta 36 no.1:13-26 '64.

1. Department of Applied Biochemistry, Andrija Stampar School of Public Health, Faculty of Medicine, University of Zagreb, Zagreb. Present address: Clarkson College of Technology, Potsdam, New York, U.S.A. (for Kratohvil); present address: Fuels Branch Research Council of Alberta, Edmonton, Alberta, Canada (for Shulz).

LACAN, Marijan, prof. dr inz.; MATASOVIC, Danko, dipl. inz.; PANTLIK, Vlasta, dipl. inz.; DEZELIC-SUFLAJ, Lidija, dipl. inz.

Preparation of water soluble sodium, ammonium and magnesium lignosulfonates. Kem ind 13 no.12:977-995 D '64.

1. Faculty of Technology of the University of Zagreb, Zagreb.

DEZELIC, V.

Yugoslavia (430)

Technology

The French petroleum industry. p. 51.
NAFTA. Vol. 3, no. 2, Feb. 1952.

East European Accessions List. Library of Congress. Vol. 2, no. 3, March 1953. UNCLASSIFIED

DEZELIC, V.

Yugoslavia (430)

Technology

Selective extraction. p. 133. NAFTA.
Vol. 3, no. 5, May 1952.

East European Accessions List. Library of Congress. Vol. 2, no. 3, March 1953. UNCLASSIFIED

DEYZENROT, I.V.; KOGAN, V.B.; FRIDMAN, V.M.

Method of separation of pure hexamethylenediamine. Khim. prom. 41 no.3: 178-180 Mr '65. (MIRA 18:7)

SAVINOVSKIY, N., kand.tekhn.nauk; DEZENT, G., inzh.; DEMIDENKO, V.; GISIN, I., kand.sel'skokhozyaystvennykh nauk

Operation of continuous freezers. Khol.tekh. 37 no.5:35-39 S-O '60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti (for Savinovskiy). 2. Moskovskiy khladokombinat imeni A.I. Mikoyana (for Dezent and Demidenko). 3. Nauchno- issledovatel'skiy eksperimental'no-konstruktorskiy institut prodovol'stvennogo mashinostroyeniya (for Gisin).

(Ice-cream freezers)

BOUSHEV, T.A.; DEZENT, G.M.; GOHBUNOV, M. retsenzent; SUHKOV, V., redaktor; AKIMOVA, L.D., redaktor; GOTLIB, E.M., tekhnicheskiy redaktor.

[Equipment for manufacturing ice cream] Oborudovanie dlia proizvodstva morozhenogo. Moskva, Pishchepromizdat, 1955. 136 p. (Ice cream industry) (MLRA 8:12)

DEZERT, G., inzhener.

Ice cream production in various countries (From: "Ice Cream Review" March 1955, "Ice cream Field" January and February 1955, "Revue Pratique du Froid" November 1954). Khol.tekh. 32 no.3:76-77 Jl - S '55. (Ice cream industry) (MLRA 9:1)

DEZENT, G., inzhener.

Equipment for the production of individual package ice cream. (From: "Ice Cream Field" June 1955, "Ice Cream Trade Journal" January 1953). Khol.tekh. 32 no.4:74 O-D '55. (MIRA 9:4)

(United States--Ice cream, ices, etc.)

DEZENT, G., inzhener.

Technical requirements guaranteeing high-quality ice cream manufacture. (From "Ice Cream Field" March 1955). Khol.tekh.33 no.1:79 Ja Mr '56. (Ice cream industry) (MLRA 9:7)

[redacted], G., inzhener.

The use of heat pumps: (from "Canadian Refrigerating Journal no.2, 1955). Khol.tekh. 33 no.3:73 Jl - S '56. (MLRA 9:10)
(Canada--Heat pumps)

DeZeNT, G.

DEZENT, G., insh.

Innovations in the mechanization of conveying in ece cream plants (from "The ice cream review," 1956, "Food (Mojonnier)" 1956). Khol. tekh. 34 no.4:74-75 O-D '57. (MIRA 11:1)
(Ice cream industry--Equipment and supplies)
(Conveying machinery)

SAVINOVSKIY, Nikolay Grigor'yevich; DEZENT, German Moiseyevich; KAPLUN, M.S., red.; MAMONTOVA, N.N., tekhn. red.

[Continuous ice-cream freezers] Rezhim raboty frizera nepreryvnogo deistviia; nauchnoe soobshchenie. Moskva, Gos. izd-vo torg. lit-ry, 1960. 17 p. (MIRA 15:4)
(Ice-cream freezers)

DEZENT, G., inzh.

Apparatus for a fast-freezing and hardening process of making ice cream for waffle cups and cones. Khol.tekh. 37 no.1: 55-56 Ja-F '60. (MIRA 13:5)
(Ice-cream freezers)

DEZENT, German Moiseyevich; BOUSHEV, Tikhon Alekseyevich; MASLOVA, Ye.F., red.; BRODSKIY, M.P., tekhn. red.

[Equipment and production lines in the ice cream industry] Oborudovanie i potochnye linii dlia proizvodstva morozhenogo. Moskva, Gos. izd-vo torg. lit-ry, 1961. 215 p. (MIRA 14:10)
(Ice cream industry—Equipment and supplies)

DEZENT, G.M., starshiy tekhnolog; RIVKIND, Ya.I.; KORKIN, P.A.

Worthy welcome to the 22d Congress of the CPSU. Khol. tekh. 38 no.5:22-30 S-O '61. (MIRA 15:1)

1. Glavnyy inzhener Moskovskogo kholodil'nika No.7 (for Rivkind).
2. Direktor Leningradskogo khladokombinata (for Korkin).
(Cold storage)

DEZENT, G.M., inzh.

Air conditioning in universal cold storage warehouses. Khol. tekh. 40 no.5:67-69 S-O '63. (MIRA 16:11)

BERKESH, I. [Berkes, I.]; DEZHI, I. [Dezsi, I.]; KESTKHELI, L. [Keszthelyi, L.]; FODOR, Ye. [Fodor, I.]

Reaction with proton capture on Na^{23}, Mf^{26}, Al^{27}, and P^{31} nuclei. Zhur. eksp. i teor. fiz. 45 no.6:1731-1736 D '63. (MIRA 17:2)

1. TSentral'nyy issledovatel'skiy institut fiziki Vengerskoy Akademii nauk, Budapesht.

DEZHIN, A.

Communist Youth League crew. Grazhd.av.13 no.12:8 D '56. (MLRA 10:2)
(Aeronautics in agriculture)

DEZHIN, A.

Specificity above all. Grazhd.av. 17 no.4:12-14 Ap '60.
(MIRA 13:9)
(Communist Youth League)

DEZHIN, A.

Moscow -- Perm. Grazhd. av. 21 no.8:20 Ag '64. (MIRA 18:4)

NABIYEV, M.N.; PALETSKIY, G.V.; ANISIMKIN, I.G.; REBENKO, M.; KALININ, Ye.P.; TROFIMOV, S.M.; VURGAFT, G.V.; POPOV, V.S.; KOROL', P.Z.; KULIK, A.A.; KAL'MAN, L.A.; FARBER, S.I.; MATVEYEVA, N.Ye.; GAVRILOV, V.S.; KADYROV, V.M.; IL'YASOV, A.I.; YAKUBOV, S.G.; PROSKURIN, M.P.; NESTERENKO, A.P.; DEZHIN, N.D.; KOCHEROV, V., red.; POPOV, V., red.; SALAKHUTDINOVA, A., tekhn. red.

[Chirchik, a city of major industrial chemical complexes] Chirchik - gorod bol'shoi khimii. Tashkent, Gosizdat UzSSR, 1962. 82 p. (MIRA 16:6)

1. Chlen-korrespondent Akademii nauk UzSSR (for Nabiyev).
2. Rabotniki Chirchikskogo elektrokhimkombinata (for all except Nabiyev, Kocherov, Popov, V., Salakhutdinova).
(Chirchik—Chemical plants)

DEZHIN, Vl. (Moskva)

Address on the last page. Sov. profsoiuzy 19 no.18:39 S '63.
(MIRA 16:12)

DEZHIN, V.N., inzhener; LYUBENETSKIY, A.M., inzhener.

Electron relay for pulse signal systems. Elek.sta. 28 no.1:90 Ja '57. (MLRA 10:3)
(Pulse techniques (Electronics))
(Electric relays)

SOV/124-57-9-11022

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 9, p 161 (USSR)

AUTHORS: Ivanov, A.M., Falevich, B.N., Dezhin, Yu.V., Aksenov, B.G.

TITLE: Carrying-capacity Tests on Hoppers and Pyramid-shaped Thickeners (Ispytaniye nesushchey sposobnosti zhelezobetonnykh bunkerov i piramidal'nykh sgustiteley)

PERIODICAL: Tr. Rostovsk. n/D. inzh.-stroit. in-ta, 1956, Nr 5, pp 41-48

ABSTRACT: Test results have shown that the law governing the pressure of pourable [cohesionless] substances in an infinite volume is not applicable to the calculation of hopper designs and that typical hoppers and funnel boxes in dressing mills at present are designed with an excessive margin of strength.

Reviewer's name not given.

Card 1/1

DEZHIN, Yuriy Vyacheslavovich; ZURANDZHI, V.A., dots., kand. tekhn. nauk, nauchn. red.; SAAK'YAN, Yu.A., red.

[Pile foundations for large-panel buildings on sagging soil in Rostov Province] Svainye fundamenty krupnopanel'nykh zdanii v usloviiakh prosadochnykh gruntov Rostovskoi oblasti. Rostov-na-Donu, Rostovskoe knizhnoe izd-vo, 1964. 45 p. (MIRA 18:3)

USSR/Miscellaneous - Communications

Card 1/1 Pub. 133 - 4/23

Authors : Bodrov, G. D., Engineer of the Research Institute for Bridge Construction; and Dezhinov, A. M., Acting Head of the Structural Department of the Ministry of Railways

Title : Durable poles for communication lines

Periodical : Vest. svyazi 8, 6-7, Aug 1954

Abstract : The replacement of wooden poles by hollow, reinforced-concrete poles for communication lines is recommended. The design of hollow concrete poles, the grade of cement used in the concrete mixture, the armature, the sheathing and the process of constructing and installing the poles are described in detail. Diagrams.

Institution : ...

Submitted : ...

Subject : USSR/Electricity AID P - 1388

Card 1/1 Pub. 26 - 15/30

Authors : Bodrov, G. D., Eng., and Dezhinov, A. M., Eng.

Title : Production and testing of reinforced concrete poles.

Periodical : Elek. Sta., 2, 44-46, F 1955

Abstract : The authors present data from their own practice in building communication lines and 6 to 10-kv power transmission lines with reinforced concrete poles. This experience, according to a note by the editors, is applicable also to 35 to 110-kv power transmission lines. 1 drawing, 3 photographs.

Institution: None

Submitted : No date

Dezhinov, A.M.

BONROV, G.D., inzhener; DEZHINOV, A.M., inzhener.

Hollow conical poles for contact systems and telegraph and telephone lines. Transp. strei. 5 no.9:9-12 N '55. (MIRA 9:2)
(Electric lines--Poles)

DEZHKIN, V.V.

Results of temperature measurements in beaver rooms. Zool.zhur. 38 no.1:126-131 Ja '59. (MIRA 13:4)

1. Voronezh State Preserve.
(Beavers) (Animals, Habitations of)

DEZHKIN, V.V.

Present distribution of beavers in Eurasia. Zool. zhur. 40 no. 1:106-116 Ja '61. (MIRA 14:2)

1. Voronezh State Preservation, Grafskaya Station, Voronezh Region.

(Beavers)

BARABASH-NIKIFOROV, I.I.; DEZHKIN, V.V.; D'YAKOV, Yu.V.

Beavers of the Don River basin; ecology and economic problems. Trudy Khop.gos.zap. no.5:3-115 '61. (MIRA 16:2)
(Don Valley--Beavers)

DEZHKIN, Vadim Vasil'yevich; BARABASH-NIKIFOROV, I.I., prof., retsenzent; ROMANNIKOV, F., red.; KARZHAVINA, Ye., tekhn. red.

[Book for hunters and anglers] Okhotniku i rybolovu. Lipetsk, Lipetskoe knizhnoe izd-vo, 1961. 149 p. (MIRA 14:8)
(Hunting) (Fishing)

DEZHKIN, V.V. (st. Grafskaya)

Birth of the young of beavers and deer. Priroda 51 no.8:128 Ag '62. (MIRA 15:9)

1. Voronezhskiy gosudarstvennyy zapovednik.
(Voronezh preserve--Beavers)
(Voronezh preserve--Deer)

DEZHKO, S.V., inzh.

Shell molding of bronze parts. Mash.Bel. no.4:88-90 '57.
(MIRA 11:9)
(Shell molding (Founding)) (Bronze founding)

DE-ZHORZH, N.

Mechanical handling of bagged loads. Muk.-elev.prom.21 no.6:21-22 Je '55. (MLRA 8:10)

1. Voronezhskaya kontora Zagotzerno
(Fork lift trucks) (Conveying machinery)

DE-ZHORZH, N.

DE-ZHORZH, N., inzh.

Grain procurement stations need chief engineers. Muk.-elev.prom. 24 no.2:30 F '58. (MIRA 11:4)

1. Voronezhskoye oblastnoye upravleniye khleboproduktov.
(Voronezh Province--Grain elevators)

DE-ZHORZH, N., inzh.

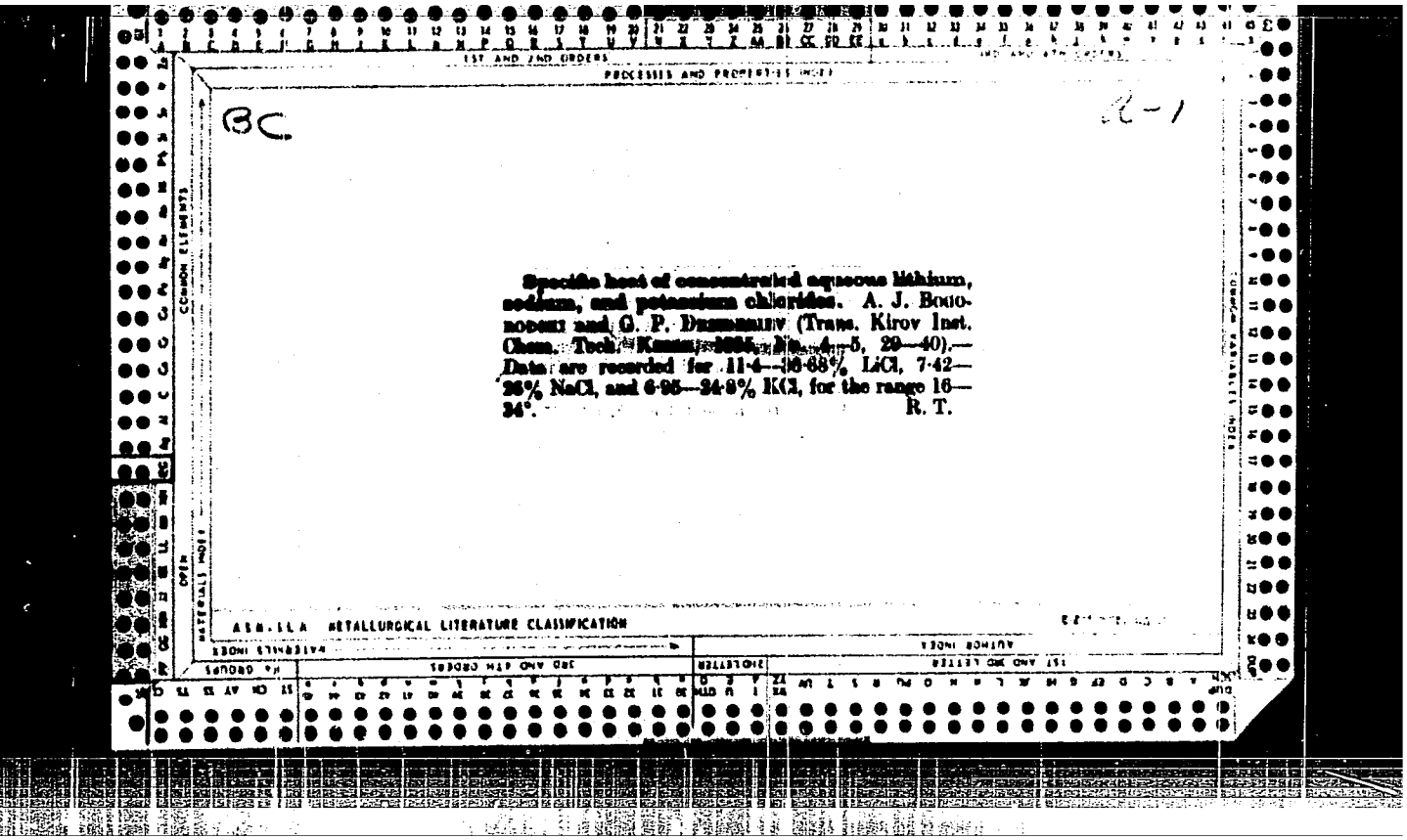
Improve movable single-duct ventilation installations. Muk.-elev. prom. 24 no.3:29 Mr '58. (MIRA 12:9)

1. Voronezhskoye upravleniye khleboproduktov.
(Ventilation)

DEZHURNYY, G.

Kopel'man, S. and Dezhurnyy, G. "X-ray detection of ascaris," Trudy Khovrin. obl. klinich. bol'nitsy, Khovrino (Moscow Oblast), 1948, p. 131-38

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)



BC

2-1

Specific heat of concentrated aqueous lithium, sodium, and potassium chlorides. A. J. Bokio-nobenki and G. P. Dmitrievskiy (Trans. Kirov Inst. Chem. Tech. Kazan, 1956, No. 4, 5, 29—40).—Data are recorded for 11·4—40·68% LiCl, 7·42—26% NaCl, and 6·95—24·8% KCl, for the range 16—34°. R. T.

DEZIDER'YEV, G.P.

Using zincate electrolytes in electroplating. Trudy KKHTI no.11: 44-46 '47. (MIRA 12:11)

(Zinc plating)

DEZIDER'YEV, G.P.; KURENEV, V.Ya.; PUSHKINA, N.N.; SHAPOSHNIKOVA, N.A.

Visual aids for studying chemistry in institutions of higher learning. Trudy KKHTI no.13:118-125 '48. (MIRA 12:12)

1.Kazanskiy khimiko-tekhnologicheskiy institut im. S.M. Kirova, kafedra neorganicheskoy khimii.
(Chemistry--Study and teaching) (Audio-visual aids)

DEZIDER, M. G. P.

PA 39/49T16

USSR/Chemistry - Anod^es, Corrosion Apr 49
Chemistry - Corrosion, Measurement of

"Anode Solution of Corroded Metals," G. A. Vozvizhenskiy, G. P. Dezider'yev, V. A. Dmitriyev, Chem Inst imeni A. Ye. Arbuzov, Kazan Affiliate, Acad Sci USSR, 3 pp

"Dok Ak Nauk SSSR" Vol LXV, No 5

Authors previously advanced a theory representing process of anode solution as a process of electro-decrystallization. According to this, surface of a metal which has undergone anode dissolving must have a "corroded texture" - a regular, although invisible, corrosion. Checks this theory experi-

[redacted] 39/49T16

USSR/Chemistry (Contd) Apr 49

mentally for copper, brass, and duraluminum by measuring luster, considered as a function of surface texture. Submitted by Acad A. Ye. Arbuzov, 12 Feb 49.

[redacted] 39/49T16

DEZIDER'YEV, G.P.

VOZDVIZHENSKIY, G.S.; DEZIDER'YEV, G.P.; DMITRIYEV, V.A.

Anodic dissolution of textured metals. Izv.Kazan.fil.AN SSSR Ser.khim.nauk no.1:63-74 '50. (MLRA 10:5)
(Metals--Finishing) (Electrolytic polishing)

DEZIDER'YEV, G. P.

USSR/Chemistry - Electrochemistry of Metals May 51

"Anodic Dissolution of Texturized Metals," G. S. Vozdvizhenskiy, G. P. Dezider'yev, V. A. Dmitriev, Chem Inst imeni Acad A. Ye. Arbuzov, Kazan' Affiliate, Acad Sci USSR

"Zhur Fiz Khim" Vol XXV, No 5, pp 547-554

Exptl technique showing presence of etching texture in metals subjected to anodic dissolving was developed and the influence on this process of texture acquired in the course of cold working shown. General rule defining dependence of anodic dissolution on the crystallographic homogeneity of surface was formulated.

LC 190T8

DEZIDER'YEV, G. P.

*Nickel-Hydrogen Electrode. S. I. Berezina, G. S. Vozdvizhenskiy, and G. P. Dezider'ev. (*Doklady Akad. Nauk S.S.S.R.*, 1951, 77, (1), 53–55).—[In Russian]. The behaviour of the Ni–H electrode (Ni plate 10 × 10 mm.) was studied in 0·1, 0·01, and 0·001*N*-HCl and NaOH, and in buffer soln. (Na acetate and HCl or NaH_2PO_4; H_3BO_3 and borax).

A smooth electrode of sheet Ni, even after long treatment with gaseous H, did not give a stable and reproducible potential. In later experiments, the Ni electrode was coated with "black Ni" by electrodeposition from soln. contg. (g./l.) Ni ammonium sulphate 33, Na–K tartrate 14, at c.d. 0·1 amp./cm.^{2}, 20° C., *p*H 6·6, with electrolytic Ni anodes. By varying the conditions, deposits of different shades could be obtained, but the most stable potentials were given by greyish-black deposits. The black-velvety deposits (resembling Pt black) obtained at higher c.d. were less useful for determining *p*H, as their H potentials changed with time. For the standard deposits, the Ni–H electrode gave *p*H values of 1·0, 2·35, and 3·3 when the Pt–H electrode indicated *p*H of 1·1, 2·0, and 3·1, resp. For higher values (up to *p*H 12·8) the Ni–H and Pt–H electrodes gave identical values. Other electrodes were prepared by electrodeposition from baths contg. (g./l.): $NiSO_4$ 250, H_3BO_3 30, KCl 5, at c.d. 1 amp./cm.^{2}, 25° C., *p*H 4·8. These Ni–H electrodes indicated *p*H values of 2·38, 1·95, 3·50, 5·84, 7·10, 10·6, and 11·5, when the values according to the Pt–H electrode were: 1·10, 2·05, 3·00, 6·18, 8·10, 11·5, and 12·7, resp. The use of the Ni–H electrode in determining the *p*H of the cathode region in electrolysis, and especially in Ni electrodeposition is discussed.—G. V. E. T.

"The Nickel/Hydrogen Electrode and Some of Its Applications. S. N. Berezina, G. S. Vozdvizhensky, and Z. P. Dvoi. derzev (*Zhur. Prikład. Khim.*, 1952, 25, (9), 971–977 (in Russian); *J. Appl. Chem. U.S.S.R.*, 1952, 25, (9), 1057–1060 (in English)).—A smooth Ni electrode did not give stable and reproducible values of potential even after prolonged treatment with H. A 10 × 10 mm. Ni plate was therefore electroplated with Ni black from a bath contg. (g./l.): $Ni(NH_4)_2(SO_4)_2$ 33, KNa tartrate 14, at c.d. 0·1 amp./dm.², temp. 20° C., and pH 6·6, with anodes of electrolytic Ni. Greyish-black deposits gave the best results. The behaviour of Ni/H electrodes so prepared was compared with that of the Pt/H electrode in 0·1, 0·01, and 0·001*N* soln. of HCl and NaOH, and in buffer soln. (Na acetate and HCl or Na acid phosphates, also H_3BO_3 and borax); agreement was satisfactory except at pH < 3. With electrodes prepared by deposition from a bath contg. (g./l.): $NiSO_4$ 250, H_3BO_3 30, KCl 5, at c.d. 1 amp./dm.², temp. 15° C., pH 4·8, agreement was not so good (best at pH of 2–6). Tests were made on the use of the electrode for controlling Ni plating, the Ni-plated work (20 cm.²) serving also as the electrode; the bath (100 ml.) contained (g./l.): $NiSO_4$ 220, H_3BO_3 25, KCl 5. The potential of the electrode was determined to an accuracy of 0·01 V. at the moment that the polarizing circuit was disconnected. The use of insoluble (Pt) anodes considerably increased the acidity: on passing 0·4 amp.-hr. at 1 amp./dm.² the overall pH fell from 5·2 to 2·6, and that of the catholyte from 8·8 to 5·3. The deposits became sensitive to impurities as the pH increased, and at pH 5·3 were under internal stress and tended to peel. With soluble Ni anodes it was established that good Ni deposits were obtained only at a catholyte pH of 8·0–9·5. The pH of the catholyte indicates irregularities in operation of the bath more accurately than that of the bath as a whole. Other experiments are described which show that the Ni/H electrode can be used for potentiometric titrations, except in acid soln.—G. V. E. T.

DEZIDERYEV G. P.

Anodic polarization in silicate solutions and the chemistry of film formation during mechano-anodic cutting. G. P. Dezideryev and S. I. Detsina. *Izvest. Kazan. Filiala Akad. Nauk S.S.S.R., Ser. Khim. Nauk* 1955, No. 2, 53-91. —The chemistry of anodic cutting of alloys with silicate solns. was studied by following the concn. changes and the film formation in the near anodic space with a Na silicate soln., d. 1.30, modulus 2.75, approaching the compn. of $Na_2SiO_3.2SiO_2$. The progress of film formation was followed with a microscope during the electrolysis with a thin glass wall cup, as the cathode, and a Pt anode. With an initial c.d. of 0.5 amp./sq. cm. a thin, thinsprint film with small bubbles of O formed in 0.3 sec. In 1 sec. a jelly-like transparent film of greater thickness and larger O bubbles formed. In 2 sec. the center of the film became cloudy. The same results were obtained with a cold anode (Pt crucible filled with ice). On an Fe electrode with a c.d. of 1.1 amp./sq. cm. the film became colored after 1 sec., and after 2 sec. yellow-brown flecks appeared in the transparent jelly-like film. In 1 min. the c.d. dropped to 0.1 amp./sq. cm. and the film became appreciably dehydrated. Similar results were obtained with Cu (bluish film) and brass and Zn (white films); with 18-8 stainless steel the film was green-yellow. Studies with indicators, potentiometric detn., and H_2SO_4 titration indicated that dense films (essential to mechano-anodic work) formed at a pH of 9.0-9.5. The potential of a Pt anode rose d. 0.004-0.006 sec. after interrupting the current (cf. *C.A.* 49, 10100*h*) increased with the c.d. in all solns. of $SiO_2:Na_2O$ from 0.30 to 2.74 and SiO_2 concn. from 0.345 to 1.761*M*, and decreased with the $SiO_2:Na_2O$ ratio. I. B.

DEZIDER'YEV, G.F.

USSR

Change of acidity of the cathodic space during electrol. Yas. B. I. Berezina, A. Sb. Valuev, G. S. Vorob'ichenskii, T. N. Grechukhina, and G. P. Dzidziguri. *Zhur. Fiz. Khim.* 29, 237-43(1955); cf. *C.A.* 48, 7468i.—The potential φ of a platinized Pt cathode in 0.01*N* H_2SO_4 was, e.g., 0.164 v. (against a Hg/HgCl electrode) after current of c.d. 0.05 amp./sq. dm. and 0.690 v. after c.d. 2.00 amp./sq. dm., both 0.004 sec. after the interruption of the current; while 0.20 sec. later, φ was 0.138 and 0.549 v., resp. This potential was a measure of the pH in the cathodic space. The pH calcd. from φ agreed with that detd. in the bulk of the electrolyte at very small c.d. The range of c.d., in which this agreement persisted, was made wider by stirring and by an increase in temp. (to 50°), and narrower by addn. of NaCl or KCl. At higher c.d., the calcd. pH was greater. The concn. of SO_4^{--} ions also was greater (at the cathode) than before the electrolysis. J. J. Bikerman

DEZIDER'YEV, G.P. (Kazan')

Prof. G.S. Vozdvizhenskii's scientific work; on his 50th birthday.
Trudy KKHTI no.21:3-13 '56. (MIRA 12:11)
(Vozdvizhenskii, Gennadii Serafimovich, 1906-)
(Electrochemistry)

DEZIDER'YEV, G. P.

137-1957-12-24615

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 238 (USSR)

AUTHOR: Dezider'yev, G. P.

TITLE: On the Operation of Anodes in Galvanizing Tanks (O rabote anodov galvanicheskikh vann)

PERIODICAL: Izv. Kazansk. fil. AN SSSR, ser. khim. n., 1957, Nr 3, pp 57-61

ABSTRACT: An examination of the problems of the electrochemical dissolution of anodes (A) under various conditions of electrolysis, including those involving a high D_A, when chemical changes in the area of the electrodes considerably affect the anodic process. Solutions of $NiSO_4 \cdot 7H_2O$ (containing 100, 200, 300, and 400 g/liter of $NiSO_4 \cdot 7H_2O$) were employed to measure the E at the Ni anode at the instant when the polarizing current was turned on. The D_A varied from 0 to 6 amp/dm^2. The effect of an addition of 5, 10, and 15 g/liter of $NiCl_2 \cdot 6H_2O$ on the anodic polarization was studied. Without the addition of Cl ion the anodic polarization of Ni proceeds almost identically in solutions containing 100, 200, 300, and 400 g/liter of $NiSO_4 \cdot 7H_2O$. With the current turned off and D_A not exceeding 4 amp/dm^2, E attains a value of 1.760-1.770 v, which is indicative of relatively constant concentration of Ni in

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On the Operation of Anodes in Galvanizing Tanks

the area of the cathode. E is lowered by equal additions of the Cl ion in proportion to the decrease in the concentration of $NiSO_4 \cdot 7H_2O$ in solution. In spite of a considerable reduction in polarization when small amounts of Cl^- are added to 0.70N solution of $NiSO_4 \cdot 7H_2O$, the process of dissolution of the A is rather complex, and is accompanied by the corrosion of the A, the formation of deep pits, and the appearance of a second branch on the polarization curve. At a D_A of 0.5 - 3.0 amp/dm^2 the addition of 10 and 15 g/liter of $NiCl_2 \cdot 6H_2O$ to 0.7 N solution of $NiSO_4 \cdot 7H_2O$ reduces the E by more than 1300 mv. In the general instance of dissolution of a Ni anode, the inertness of the latter at the given D_A leads to a discharge of OH; this causes the liquid near the anode to oxidize and changes its composition in a manner causing it to react chemically with the oxides formed. This conclusion is corroborated by a systematic study of the anodic E of a brass alloy (containing approximately 32 percent Zn) as a function of the D_A in electrolytes of different composition.

Ya. L

Card 2/2

1. Anodes (Electrolytic cell)-Operation-Analysis

SOV / 20-120-1-26/63

AUTHORS: Vozdvizhenskiy, G. S., Gorbachuk, G. A., Dezider'yev, G. P.

TITLE: On the Problem of the Mechanism of the Electrolytic Polishing of Metals and of the Structure of the Polished Surface (K voprosu o mekhanizme elektroliticheskoy polirovki metallov i strukture elektropolirovannoy poverkhnosti)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 1, pp.101-102 (USSR)

ABSTRACT: The problem of the mechanism of the electrolytic polishing is directly connected with the problem of the structure of an electrically polished surface. The electromicrosoopic investigation of such an electrically polished surface carried out by the authors (Ref 2) showed that the conception of 2 different stages of electro-polishing and especially the conception of the suppression of the structural blanching in the second stage are not at all beyond any doubts. The present paper gives some results of these investigations. Electrically polished samples of polycrystalline copper were investigated. This electric polishing took place in an 5-M-

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On the Problem of the Mechanism of the Electrolytic Polishing of Metals and of the Structure of the Polished Surface

-solution of phosphoric acid. Colloidal replica were taken of the samples which had been electrically polished for different periods (10, 25 and 180 seconds) and then they were investigated by means of the electron-microscope. According to these microphotographs in the first stage of electro--polishing (100 seconds) an active structural blanching takes place. The result of this blanching highly depends on the degree of the electrochemical inhomogeneity of the surface. A prolongation of the duration of electro-polishing leads to a further change of the character of structural blanching. A further increase of the duration of the electro-polishing to 180 seconds (i.e. the transition to that stage which is regarded the decisive stage of the process) does not bring about any important qualitative changes for the picture of structural blanching. The enclosed microphotographs do not tend to show in any way a suppression of the structural blanching during the total duration of the process. The mentioned data agree with those of other authors (Ref 4).

Card 2/3 There are 4 figures. and 17 references, 8 of which are Soviet.

SOV/ 2o-12o-1-26/63

On the Problem of the Mechanism of the Electrolytic Polishing of Metals and of the Structure of the Polished Surface

ASSOCIATION: Khimicheskiy institut Kazanskogo filiala Akademii nauk SSSR (Chemical Institute of the Kazan' Branch, AS USSR)

PRESENTED: January 2, 1958, by A. N. Frumkin, Member, Academy of Sciences, USSR

SUBMITTED: November 18, 1957

1. Metals--Surface properties 2. Electrolytic polishing--Analysis 3. Surfaces--Structural analysis 4. Electron microscopes--Applications

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67895

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S/020/60/130/06/025/059
B004/B007

AUTHORS: Dezider'yev, G. P., Berezina, S. I.

TITLE: The Diffusion Limiting Current on to a Rotating Disk Electrode in Cathodic Hydrogen Separation

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 6, pp 1270 - 1272 (USSR)

ABSTRACT: In reference 1 the authors showed that the maximum current density in the cathodic separation of hydrogen on platinum or nickel electrodes from a sulphuric acid solution is characterized by the fact that the discharge reaction $H^{\circ} + e \rightarrow H$ is followed by the reaction $H_2O + e \rightarrow OH' + H$ in the alkalized layer of the electrolyte adjoining the cathode. This alkalization occurs by the accumulation of impurity cations, the concentration of which may be calculated according to an equation by A. N. Frumkin (Ref 2) and which, according to the experimental data obtained by the authors, amounts to about $10^{-8} - 10^{-9}$ n. The concentration drop of the ions determining the potential in the boundary film at the electrode may be decreased by circulation of the electrolyte. In the case dealt

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The Diffusion Limiting Current on to a Rotating Disk Electrode in Cathodic Hydrogen Separation

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with by the authors, viz. gaseous separation of hydrogen, electrolyte circulation was influenced by two factors: 1) Rotation of the platinum disk electrode (1000 - 22000 r.p.m.), and 2) intermixture of the electrolyte by the gas bubbles. The authors intended to find out the manner in which these two factors act. They determined the potential of the electrode by means of a capacity circuit, which was switched on 10^{-3} sec after the polarization current had been switched off. Whereas in a diluted solution (0.0005 - 0.004 N) and in the case of a small number of revolutions of the electrode the limiting current may be determined directly from the polarization curve, disturbances caused by turbulent gas separation and heating of the electrode occur at high numbers of revolution and concentrations (0.05 N). For this case the authors give an equation for the purpose of determining the limiting current on the basis of the ion concentration determining the potential. Figure 1 shows that, with an increase in the number of electrode revolutions, a linear correlation between concentration and density of the limiting current occurs. At low concentrations there is also a linear correlation between current density and

The Diffusion Limiting Current on to a Rotating Disk Electrode in Cathodic Hydrogen Separation

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the square root of the number of revolutions (Fig 2). At high concentrations the disturbing effect of the intermingling in the electrolyte of the hydrogen bubbles manifests itself. The straight lines intersect the ordinate above the points which correspond to the limiting current in the case of the electrode being at rest (Fig 3). For this case the authors derive an equation for concentration-polarization. The authors refer to V. G. Levich (Ref 3) and B. N. Kabanov (Ref 4). There are 3 figures and 5 Soviet references.

ASSOCIATION: Khimicheskiy institut Kazanskogo filiala Akademii nauk SSSR (Institute of Chemistry of the Kazan' Branch of the Academy of Sciences, USSR)

PRESENTED: November 4, 1959 by A. N. Frumkin, Academician

SUBMITTED: October 22, 1959

S/020/60/133/04/25/031
B004/B056

AUTHORS: Vozdvizhenskiy, G. S., Gorbachuk, G. A., Dezider'yev, G. P.

TITLE: The Mechanism of the Electrolytic Polishing of Metals in the Light of Electron-microscopic Studies of the Surface During the Various Stages of Treatment

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 4, pp. 869 - 871

TEXT: In an earlier paper (Ref. 4), the authors proved that in the anodic dissolution of metals a structural etching of the surface always occurs. In the present paper, the connection between anodic dissolution and metal structure was investigated. Cold-rolled copper sheets of the type M1 (M1) and cold-rolled brass sheets of the type Л59 (L59) were used as samples. Electrolytic polishing was carried out in 11.35 M orthophosphoric acid at a current density of 14.5 ma/cm^2 for copper and 19 ma/cm^2 for brass. The samples were first etched until a distinct microstructure became visible (copper with ammoniumpersulfate, brass with an aqueous solution of ammonia and hydrogen peroxide). After electrolytic polishing

The Mechanism of the Electrolytic Polishing of Metals in the Light of Electron-microscopic Studies of the Surface During the Various Stages of Treatment

S/020/60/133/04/25/031
B004/B056

of different periods of time, the surfaces were examined metallographically (200-fold magnification) and under an electron microscope (23,000-fold magnification) (Figs. 1, 2). The same experiments were carried out with copper and brass sheets annealed in vacuo (Figs. 3, 4). It follows from Figs. 1, 2 that in electrolytic polishing the surface structure orientated by rolling becomes clearly visible. By annealing, this structural orientation is again lost. A so-called suppression of structural etching does, however, not occur. Only the extent of anodic dissolution changes in accordance with the change in electrochemical inhomogeneity. Here, diffusion processes play an important part in that the differences in the metal relief caused by etching are gradually equalized. There are 4 figures and 4 references: 3 Soviet, 1 American, 1 Canadian, and 1 German.

ASSOCIATION: Khimicheskiy institut Kazanskogo filiala Akademii nauk SSSR (Chemical Institute of the Kazan' Branch of the Academy of Sciences USSR)

PRESENTED: January 28, 1960 by A. N. Frumkin, Academician
SUBMITTED: January 28, 1960

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S/137/62/000/006/138/163
A057/A101

AUTHORS: Vozdvizhenskiy, G. S., Gorbachuk, G. A., Dezider'yev, G. P.

TITLE: Electron-microscopic investigation of the process of anodic decrystallization of a metal

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1962, 90 - 91, abstract 61574 (V sb. "Rost kristallov, T. Z.", Moscow, AN SSSR, 1961, 192 - 199. Discus., 214 - 218)

TEXT: The process of anodic dissolving of rolled and annealed Cu was studied in 5% H_2SO_4 solution. The Cu-samples were etched in 10% ammonium persulfate solution, then inserted into the electrolytic bath, separated and studied metallographically and electron-microscopically. The initial surface of such samples is electrochemically non-uniform, thus after chemical etching a crystallographic structure is revealed. The anodic dissolving of the sample occurs under participation of an acceptor, which is included in the composition of the electrolyte. Microphotographs showed that the outer effect of etching in ammonium persulfate upon the rolled material corresponds to the orientation of

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A057/A101

Electron-microscopic investigation...

crystals in the direction of rolling; this is even more pronounced in electrochemical treatment. The electron-microscopic pictures reveal numerous oriented shifts inside the crystals. The annealed material shows the same picture of chemical and electrochemical dissolving as the rolled material. Since the annealed material contains considerably larger crystallites than the rolled material, the effect of chemical and electrochemical dissolving is manifested at smaller enlargements. Annealing effects desorientation of crystallites, thus the treated elements of surface do not show an orientation either on optical, or on electron-microscopical photographs. As a result of anodic dissolving of metals, the picture of the formation and growth of crystallites is clearly developed, which is a proof of the community of the electrodecrystallization mechanism at anodic dissolving of metals. There are 6 references.

Ye. Layner

[Abstracter's note: Complete translation]

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S/076/61/035/010/001/015
B101/B110

AUTHORS: Vozdvizhenskiy, G. S., Gorbachuk, G. A., and Dezider'yev, G. P. (Kazan')

TITLE: Mechanism of electrolytic polishing of metals, and structure of electropolished surface as revealed by electron microscopic analyses

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 10, 1961, 2190-2198

TEXT: The present article presents results obtained from microscopic (200-fold magnification) and electron microscopic (23,000-fold magnification) analyses of the course of electrolytic polishing of M1 (M1) copper sheet and Л59 (L59) brass sheet. The purpose of the study was to clarify the dependence of the process on the metal structure, and the role played by diffusion. The specimens were first etched until they displayed a distinct microstructure (Cu in 10% ammonium persulfate solution, 4 min at 20°C; brass in a mixture of 25% NH_3 and 3% H_2O_2, 2-3 min at 20°C). The next step was electrolytic polishing; (a) Cu in 11.35 M H_3PO_4 which

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Mechanism of electrolytic ...

contained 4.8 g/liter of Cu, at 14.5 ma/cm^2; (b) brass in 11.35 M H_3PO_4 which contained 2.9 g/liter of Cu, at 19 ma/cm^2. These optimum concentrations led to reproducible results. The reflection factor of the polished sheet was determined by putting the reflection coefficient of a silver mirror = 100%. The reflection factor was found to attain a high value, as soon as the anode potential was stable. Replicas of specimens polished between 3 and 100 min were examined in an EM-3 (EM-3) electron microscope. A second set of experiments was performed with annealed specimens made of the same metals. Cu was annealed for 1.5 hr at 700°C, and brass for 2 hr at 600°C. The specimens were polished in an electrolyte with a concentration like that of the 1st set. The current density, however, was 21 ma/cm^2 for Cu, and 16 ma/cm^2 for brass. The annealed specimens displayed an inhomogeneous surface with disoriented crystallites. In them, reflection factor and anode potential had lower values than in non-annealed metal. The processes observed are explained by deep etching figures being formed at first (after 3-5 min). Penetration into their depths is however, soon inhibited, and the respective are passivated. The crystals are then dissolved breadthwise. Electron microscopic analyses showed that the original texture of rolled (oriented) and annealed (disoriented) metal

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Mechanism of electrolytic ...

remained unchanged in this connection. The surface is smoothed by a decrystallization process (decomposition of crystallites). The anode passivation is a consequence, not the cause, of this process by which the electrochemical inhomogeneity is balanced. A paper by S. I. Kricnmar (Dokl. AN SSSR, 122, 424, 1958) is mentioned. There are 4 figures, 4 tables, and 20 references: 15 Soviet and 5 non-Soviet. The two most important references to English-language publications read as follows: G. Lucien, J. Andre, J. Phys. Chem., 57, 701, 1953; J. Edwards, J. Electrochem. Soc., 100, 189, 1953.

ASSOCIATION: Kazanskiy filial AN SSSR, Khimicheskiy institut (Kazan' Branch of the AS USSR, Chemical Institute)

SUBMITTED: August 8, 1960

Card 3/3

VOZDVIZHENSKIY, G.S.; GORBACHUK, G.A.; DEZIDER'YEV, G.P.

Mechanism of the electrolytic polishing of metals and the structure of the polished surface according to electron microscopy data. Izv.Kazan.fil. AN SSSR. Ser.khim.nauk no.6:129-143 '61. (MIRA 16:5)
(Electrolytic polishing) (Electron microscopy)

DEZIDER'YEV, G.P.; BEREZINA, S.I.

Polarization capacitance of a platinum cathode in a maximum permissible diffusion current. Izv.Kazan.fil. AN SSSR. Ser.khim.nauk no.6:150-154 '61. (MIRA 16:5)
(Electrodes, Platinum) (Polarization (Electricity))

DEZIDER'YEV, G.P.; BEREZINA, S.I.; GORBACHUK, G.A.

Formation of an oxide layer in the course of the electrolytic polishing of copper. Izv.Kazan.fil. AN SSSR. Ser.khim.nauk no.6:155-162 '61. (MIRA 16:5)
(Copper--Finishing) (Electrolytic polishing) (Metallic oxides)

L 10510-65 EWT(l)/EWI(m)/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b) IJP(c) JD/HW

ACCESSION NR: AR5006245 S/0276/64/000/011/B085/B086

SOURCE: Ref. zh. Tekhnologiya mashonstroyeniya. Svodnyy tom, Abs. 11B492 34 B

AUTHOR: Bikeyeva, L. P.; Vozdvizhenskiy, G. S.; Gorbachuk, G. A.; Dezider'yev, G. P.

TITLE: Electrochemical machining of heat resistant alloys

CITED SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 18, 1963, 171-175

TOPIC TAGS: electrochemical process, metallurgy, heat resistant alloy

TRANSLATION: Results of research on electrolytic polishing of refractory alloys with nickel and iron bases showed that this process insures an excellent surface finish and a considerable improvement in reflectivity. Alteration of surface relief of heterogeneous alloys during anode dissolution was studied under the electron microscope. Conclusions on the electrodecrystallization mechanism of anode dissolution of metals under conditions corresponding to maximum smoothing action of polishing were confirmed. L. Romancheva

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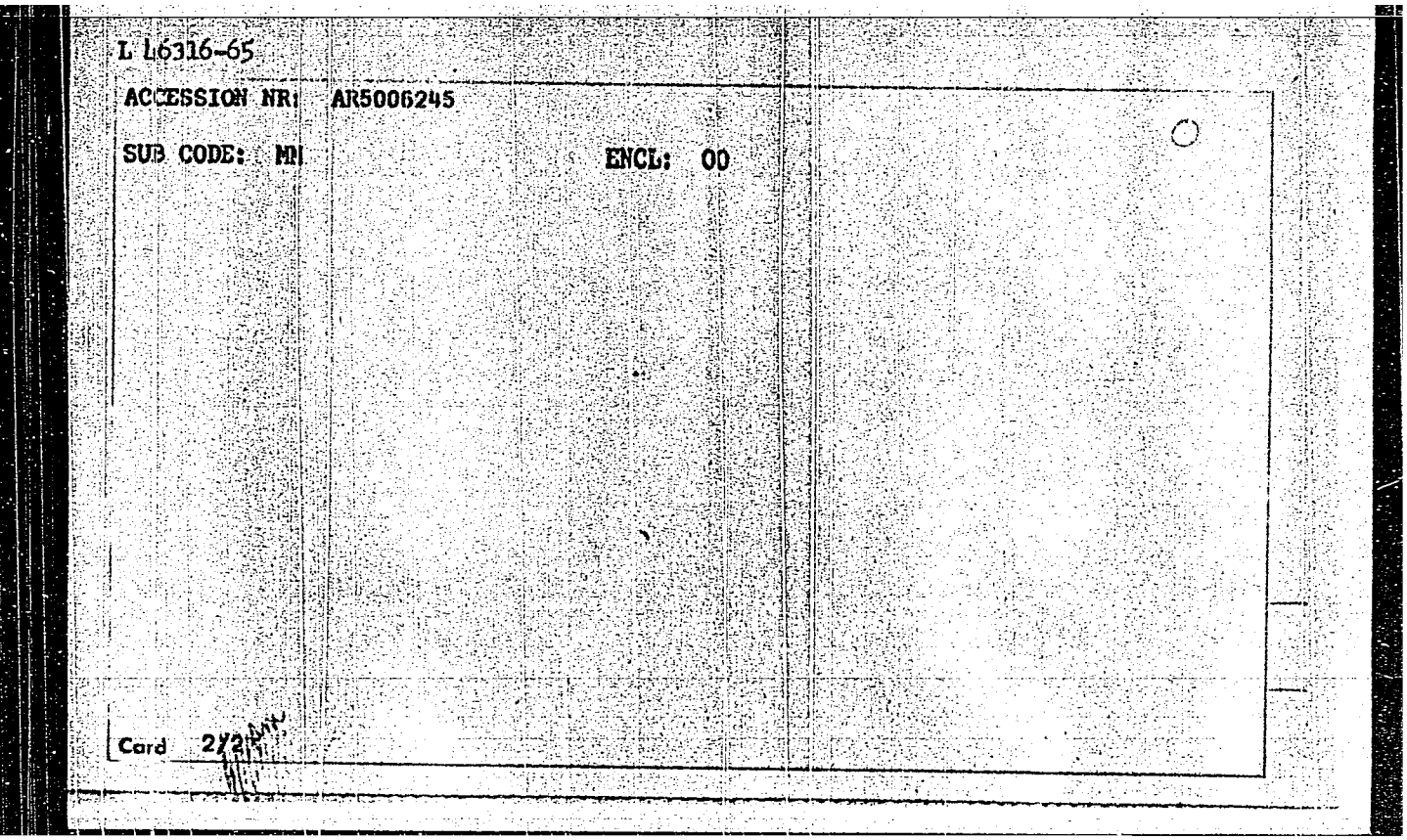

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ACCESSION NR: AR5006245

SUB CODE: MM ENCL: 00

Card 2/2

DEZIDER'YEV, G.P.; BEREZINA, S.I.; GORBACHUK, G.A. (Kazan')

Adsorption of hydrogen on a platinum cathode. Zhur. fiz. khim. 37 no.4:856-861 Ap '63. (MIRA 17:7)

1. Kazanskiy khimicheskiy institut AN SSSR.

BEREZINA, S.I.; GORBACHUK, G.A.; DEZIDER'YEV, G.P. [deceased]

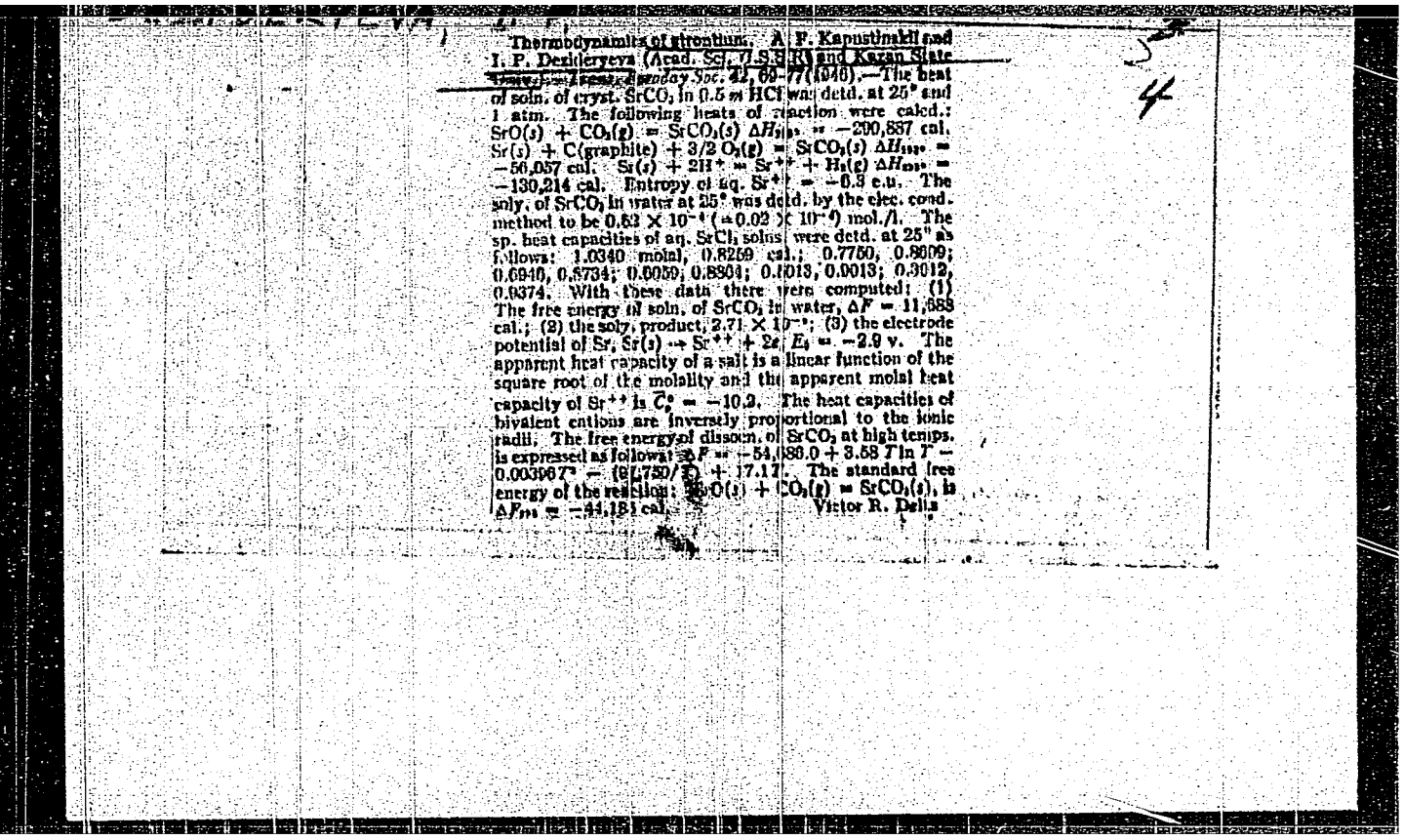
Hydrogen adsorption on a nickel cathode. Elektrokhimiia 1 no.6: 719-723 Je '65. (MIRA 18:7)

1. Khimicheskiy institut AN SSSR.

DEZIDER'YEV, G.P.; GORBACHUK, G.A.; SOZIN, Yu.I. (Kazan')

Local passivation in electrolytic polishing. Zhur. fiz. khim. 39 no. 1:55-57 Ja '65 (MIRA 19:1)

1. Khimicheskiy institut imeni A. Ye. Arbuzova AN SSSR. Submitted December 10, 1963.



Thermodynamics of strontium. A. F. Kapustinskii and I. P. Deridiveva (Acad. Sci. U.S.S.R.) and Kazan State Univ.). *Trans. Faraday Soc.* 32, 69–77 (1940).—The heat of soln. of cryst. $SrCO_3$ in 0.5 *m* HCl was detd. at 25° and 1 atm. The following heats of reaction were calcd.: $SrO(s) + CO_2(g) = SrCO_3(s)$ $\Delta H_{298} = -290,837$ cal. $Sr(s) + C(graphite) + 3/2\ O_2(g) = SrCO_3(s)$ $\Delta H_{298} = -56,057$ cal. $Sr(s) + 2H^+ = Sr^{++} + H_2(g)$ $\Delta H_{298} = -130,214$ cal. Entropy of aq. $Sr^{++} = -0.8$ e.u. The soly. of $SrCO_3$ in water at 25° was detd. by the elec. cond. method to be 0.62×10^{-4} ($\pm 0.02 \times 10^{-4}$) mol./l. The sp. heat capacities of aq. $SrCl_2$ solns. were detd. at 25° as follows: 1.0340 molal, 0.8269 cal.; 0.7750, 0.8609; 0.6940, 0.8734; 0.6059, 0.8904; 0.4018, 0.0013; 0.3012, 0.0374. With these data there were computed: (1) The free energy of soln. of $SrCO_3$ in water, $\Delta F = 11,688$ cal.; (2) the soly. product, 2.71×10^{-9}; (3) the electrode potential of Sr, $Sr(s) \rightarrow Sr^{++} + 2\epsilon$, $E_0 = -2.9$ v. The apparent heat capacity of a salt is a linear function of the square root of the molality and the apparent molal heat capacity of Sr^{++} is $\bar{C}_p^0 = -10.2$. The heat capacities of bivalent cations are inversely proportional to the ionic radii. The free energy of dissocn. of $SrCO_3$ at high temps. is expressed as follows: $\Delta F = -54,186.0 + 3.58\ T \ln T - 0.003907^2 - (87,750/T) + 17.17T$. The standard free energy of the reaction: $SrO(s) + CO_2(g) = SrCO_3(s)$, is $\Delta F_{298} = -44,181$ cal.

Victor R. Deitz

DEZIDER'YEVA, I. P.

USSR

Anodic solution of copper, zinc, and brass in cyanyanide complex electrolytes. I. P. Dezider'eva. *Issledovaniya Nauch. Rabot. Vsesoyuz. Khim. Obshchestva im. Mendeleeva* 1959, No. 2, 8–11; *Referat. Zhur., Khim.* 1964, No. 3S326.—The effect of compn. and concn. of the electrolyte, temp., and stirring on anodic polarization was studied. At small NH_4CNS excess, a Cu anode dissolved only at small c.d.; at higher c.d. the anode was passivated by becoming coated with a dense insol. layer of $Cu(CNS)_2$ and CuCNS. This was caused by insufficient concn. of NH_4CNS near the anode to form a complex. Increasing the free NH_4CNS in the soln. raised the limiting c.d. Stirring decreased anodic polarization of Cu and brass. Zn anodes did not become passivated even at high c.d. In pyrophosphate complex electrolytes, Cu anodes dissolved at small c.d. At some limiting c.d. value a change in potential occurred and the anode became coated with a brown oxide film which, however, did not passivate it. By increasing the c.d. further there occured simultaneously the evolution of O and soln. of the metal, in consequence of which the concn. of $Na_4P_2O_7$ became insufficient and insol. $Cu_2P_2O_7$ deposited on the anode. This caused another change in potential, and the anode became passivated. Increasing concn., temp., and stirring of the soln. raised the limiting value of c.d. Anodic soln. of Zn was characterized by a limiting c.d. at which an insol. film of $Zn_2P_2O_7$ formed. Brass dissolved only at small c.d. An increase in c.d. caused evolution of O and then the formation of Cu and Zn pyrophosphates which passivated the anode.

M. Hosek

DEZIDER Y-VA, I.F.

USSR

Effect of addition of organic substances on anodic polarization of zinc. F. F. Faigullin, I. F. Dezideryeva, and N. N. Muzurova. *Uchenye Zapiski Kazan. Gosudarst. Univ.* 112, No. 4, 117–20(1953); *Referat. Zhur., Khim.* 1954, No. 17869.—Satd. solns. of camphor, aniline, and octyl alc. increased the anodic and cathodic polarization of Zn in 1.5*N* $ZnSO_4$ (pH 5.5). Phenol, hydroquinone, and pyrogallol had a similar effect on anodic polarization of Zn, this effect increasing with increasing concn. At small concn. of these addns. the cathodic polarization of Zn was in some cases lower. In a zincate electrolyte (ZnO 6 and NaOH 72 g./l.) at pH 13.2, the anodic polarization of the Zn electrode was 17 mv. at 8×10^{-4} amp./sq. cm. and increased by only 5 mv. in the presence of these org. substances and urea. These results could be explained in accordance with the Loshkarev theory (Loshkarev, *et al.*, *C.A.* 34, 1255⁹) by the formation on the Zn electrode of adsorbed films of the org. substances which blocked the hydration of Zn ions entering the soln. and the discharge of Zn^{++} on the cathode. In $ZnSO_4$ soln. these films were quite strong, while in a zincate soln. strong films were not formed.

M. Hoseh

DEZIDER'YEVA, I. P.

USSR

✓Anodic process in copper plating in pyrophosphate complex electrolytes. I. P. Dezider'eva and A. I. Zhelonkin. *Uchenye Zapiski Kazan. Univ.* 113, No. 8, 27–33(1953); *Referat. Zhur., Khim.* 1954, No. 40161.—In order to find the optimum conditions for soln. of Cu anodes in electrodeposition of Cu from pyrophosphate complex electrolytes, the anodic polarization of Cu as affected by compn. and concn. was studied. In solns. contg. $Na_6Cu(P_2O_7)_2$, the Cu anode was passivated at higher anodic c.d. because of formation of insol. $Cu_2P_2O_7$. The anodic c.d. could be increased if the concn. of free $Na_4P_2O_7$ was raised and the soln. stirred and heated. M. Hosch

3

1. Kafedra Fizicheskoy Khimii
(Electrolytes) (Copper Plating)

DEZIDER'YEVA, I.P.; MALYSHEVA, N.A.

Concentration of hydrogen ions in pyrophosphate baths for copper plating. Uch. zap. Kaz. un. 113 no.8:35-40 '53.
(MLRA 10:5)

1. Kafedra fizicheskoy khimii.
(Copper plating) (Hydrogen-ion concentration)

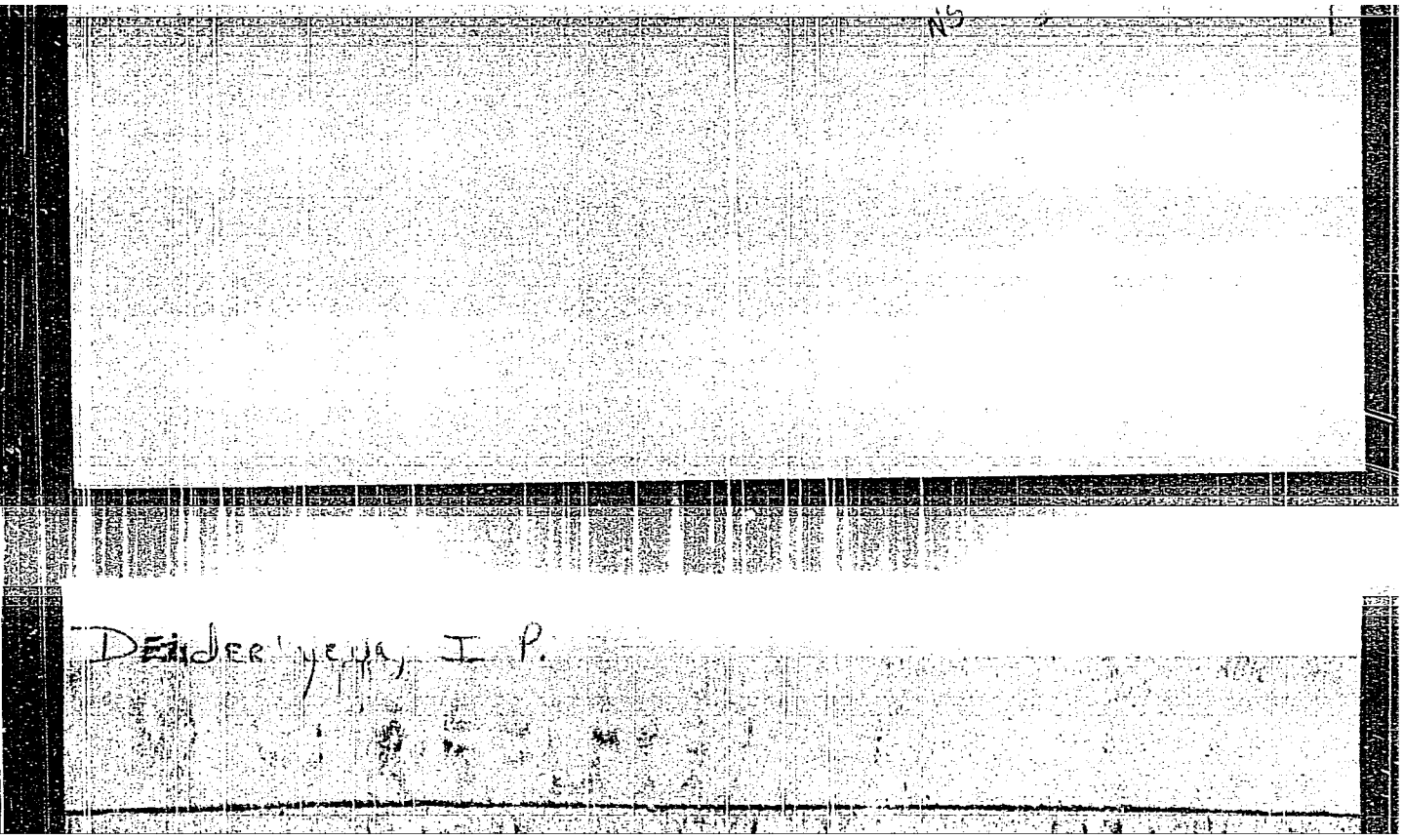
DEZIDER'YEVA, I. P.; Malysheva, N. A.

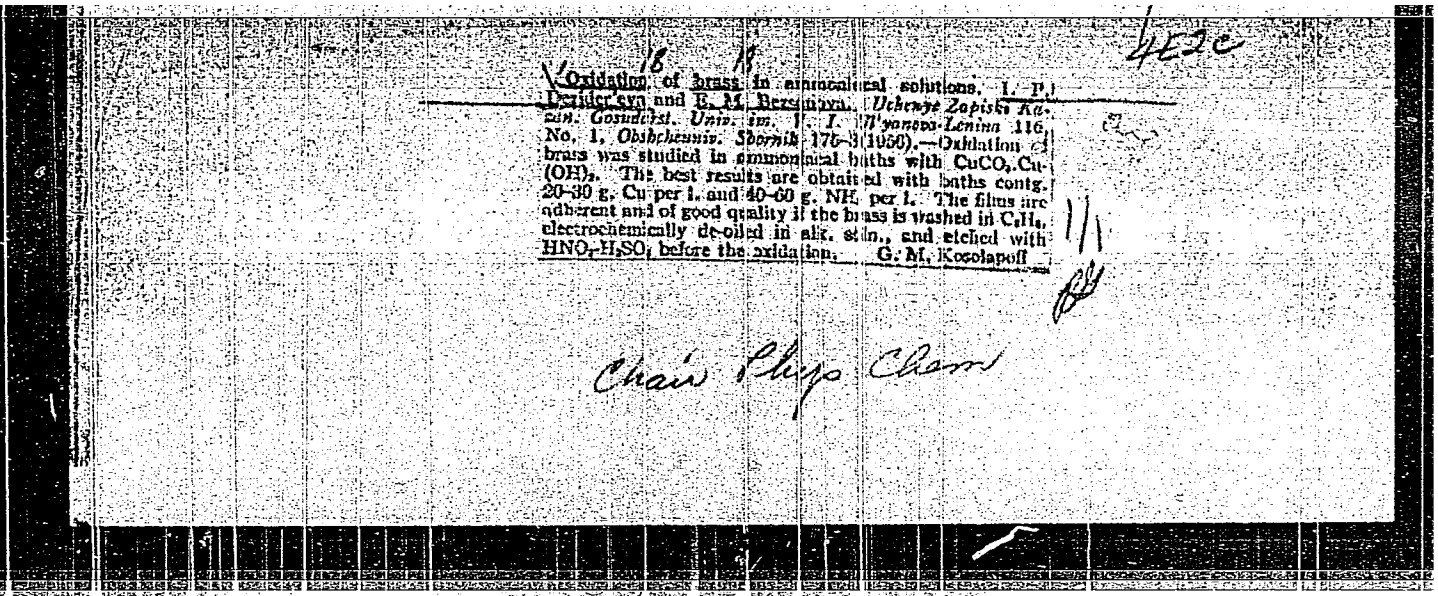
"Concentration of Hydrogen Ions in Pyrophosphate Copper Baths"
Uch. Zap. Kazansk. Un-ta, Vol 113, No 8, 1953, 35-40

Investigated problems concerning pH stability in solutions of copper pyrophosphate complexes during electrolysis, effect of pH on the quality of cathode deposition, the binding strength of copper to iron, and the anode polarization of copper. Introduction of $Na_2HPO_4 \cdot 12H_2O$ to the electrolyte increases the allowable anode current density. Recommends using a solution of the following composition (in grams): $CuSO_4 \cdot 5H_2O$, 50; $Na_4P_2C_7 \cdot 10H_2O$, 200; $Na_2HPO_4 \cdot 12H_2O$, 50; H_2O, 1,000 . (RZhKhim, No 3, 1955)

SO: Sum No 845, 7 Mar 56

Effect of orientation on the anodic behavior of copper in some electrolyte solutions. F. F. Vityuilin, I. P. Dezider'eva, and N. E. Timoshenko. *Uchenye Zapiski Kazan. Univ.* 115, No. 3, 123-37(1955); *Referat. Zhur., Khim.* 1956, Abstr. No. 6495.—The effect of orientation on the potential V and the velocity of anodic solns. on electrolytic deposition of Cu^{+} from 1N solns. of $CuSO_4$ and $Cu(NO_3)_2$ in NaOH soln. (200 g./l.) at 20° is studied. It is shown that in all electrolytes in which the anodic soln. of Cu is not accompanied by secondary processes ($CuSO_4 + H_2SO_4$, $Cu(NO_3)_2$, H_2SO_4), the measurement at anodic polarization V of the oriented deposit (OD) has more pos. value than V of the nonoriented deposit (ND); V of OD and ND samples at the same conditions (c.d. i = 1 amp./sq. dm.) are 4–12 mv. (depending on the electrolyte), while a change of the electrolyte compn. (change of ion SO_4^{--} with NO_3^-, change of pH, etc.) brings about a change of V of the given sample from 24 to 29 mv. at const. i. In the absence of polarization, the difference of V values for OD and ND samples does not exceed 2 mv. For detn. of the velocity of OD and ND anodic soln. in the same electrolyte, continuous weighing of the anode in the soln. is made while a current of const. d. is applied. It is established that in all solns. in which V of the OD sample is more pos. than V of the ND sample, the speed of the anodic soly. of OD is less than that of the anodic soly. of ND, and at the difference in the soly. speed increases with the increase of i. (As a measurement for the speed of anodic oxidation of OD and ND in NaOH soln., the time from the beginning of the electrolysis to the moment of the completion of the oxide film (lowering the current strength) is taken.) It is shown that at 0–60° and different i (0.57–1.1 amp./sq. dm.) the formation of complete oxide film on OD is faster than on ND, and the oxidation-speed difference decreases with the increase of i. The results obtained agree with previous ideas [G. B. Vozdvizhenskii, *Doklady Akad. Nauk S.S.S.R.* 59, 1587(1948)] on the anodic soln. of metals and the process of electrocrystn. N. Vasileff





16 18

Oxidation of brass in ammoniacal solutions. I. P. Dezider'eva and E. M. Berezina. *Uchenye Zapiski Kazan. Gosudarst. Univ. im. V. I. Ul'yanova-Lenina* 116, No. 1, *Obshchestv. Sbornik* 175–9 (1956).—Oxidation of brass was studied in ammoniacal baths with $CuCO_3.Cu(OH)_2$. The best results are obtained with baths contg. 20–30 g. Cu per l. and 40–60 g. NH₃ per l. The films are adherent and of good quality if the brass is washed in C_6H_6, electrochemically de-oiled in alk. soln., and etched with HNO_3–H_2SO_4 before the oxidation. G. M. Kosolapoff

Chem Phys Chem

SOV/137-58-9-19567

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 206 (USSR)

AUTHORS: Dezider'yeva, I.P., Fayzullin, F.F.

ACCESSION NR: AT4043084 S/0000/64/000/000/0412/0420

AUTHOR: Dezider'yeva, I. P., By*chkova, L. F.

TITLE: Anodic oxidation of Zn-Cd alloys in caustic soda solutions

SOURCE: Mezhvuzovskaya konferentsiya po anodnoy zashchite metallov ot korrozii. Kazan, 1961. Anodnaya zashchita metallov (Anodic protection of metals); doklady* konferentsii. Moscow, Izd-vo Mashineostroyeniye, 1964, 412-420

TOPIC TAGS: zinc, cadmium, zinc cadmium alloy, alloy anodic oxidation, caustic soda bath, passive film structural analysis, anodization process pattern, current consumption analysis, zinc content effect, anodic passivation, corrosion

ABSTRACT: The report covers a galvanometric study of anodic passivation of Cd, Zn and their alloys (25, 50 or 83% Cd) in a 1N solution of NaOH at 25C and current densities of 0.2--0.4 ma/cm^2, and an electron diffraction analysis of the structure of the passive film. Results of the latter were inconclusive. Potential-time curves were plotted and indicate two stages in anodic polarization of Cd prior to oxygen evolution (dissolution of

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ACCESSION NR: AT4043084

Cd with formation of $CD(OH)_2$ and oxidation of Cd in phase film pores). Anodic passivation of Zn under the described conditions occurs only at certain concentrations of zincate, and then it is analogous to the oxidation of Cd. The ϕ-τ curves for Zn-Cd alloys show several stages, reflecting successive oxidation of the constituents. The amount of electricity required for passivation increases with Zn content for a constant electrolyte compositon, mean values being 0.06 ± 0.01 coulombs/cm^2 for Cd, 1.3 ± 2 for Zn, and 0.16 ± 0.2, 0.5 ± 0.1 and 10 ± 2 for alloys with 83, 50 and 25% Cd, respectively. Orig. art. has: 5 graphs.

ASSOCIATION: none.

SUBMITTED: 13Mary64 ENCL: 00

SUB CODE: MM NO REF SOV: 008 OTHER: 005

Card 2/2

ACCESSION NR: AT4043090 S/0000/64/000/000/0483/0489

AUTHOR: Dezider'yeva, I. P., Sageyeva, R. M.

TITLE: Anodic oxidation of Fe-Mi alloys in caustic soda solutions

SOURCE: Mezhvuzovskaya konferentsiya po anodnoy zashchite metallov ot korrozii. 1st, Kazan, 1961. Anodnaya zashchita metallov (Anodic protection of metals); doklady* konferentsii. Moscow, Izd-vo Mashinostroyeniye, 483-489

TOPIC TAGS: iron nickel alloy, alloy anodic oxidation, electrodeposited iron nickel alloy, alloy structure, passive film structure, electron diffraction analysis, galvanometric oxidation analysis, alloy phase composition effect, anodic oxidation, corrosion, nickel containing alloy, caustic soda, alkaline corrosion

ABSTRACT: The structures of Fe-Ni alloys (32-75% Ni, electrodeposited) and the passive films developing on them were studied by electron diffraction, while galvanometric methods with automatic registration of potential-time curves were used to analyze the anodic oxidation of Fe, Ni and their alloys (25C, 1N NaOH solution, i=1 ma/cm^2). It was established that oxidation occurs in several stages; the $\varphi - \tau$ curves of the alloys are analogous to those for Fe, hence anodic oxidation of the more electrical negative alloy component governs the potential. Phase composition also affects

Card 1/2

[illegible], L. A.
USSR/Mathematics - Functionals

11 Feb 53

"Theorems of Imbedding and Problem of Extension of Functions," Dokl. AN SSSR, Vol 88, No 5, pp. 741-743.

Refers to S. L. Sobolev, who introduced and studied the classes $W_p^l(\Omega)$ of functions that posses in a region Ω generalized derivs. of order l summable with power p (see Certain Applications of Functional Analysis in Mathematical Physics, 1950). Determined the classes for arbitrary non-integers L and discusses the generalization of the imbedding theorems to this case and also the problems connected with extension of functions to a manifold of a great number of dimensions. Indebted to acad. S. L. Sobolev.

258T96

DEZIN, A. A.

USSR/Mathematics

Card : 1/1

Authors : Dezin, A. A.

Title : Second boundary problem for the polyharmonic equation in the space $W_2^{(m)}$

Periodical : Dokl. AN SSR, 96, Ed. 5, 901 - 903, June 1954

Abstract : The article defines the socalled, second boundary problem, establishes boundary conditions for it and, with the help of 3 theorems, the proofs of which are refered to the Sobolev's book on functional analyses, it gives a solution of the problem. Two references.

Institution : ....

Presented by : Academician, S. L. Sobolev, April 8, 1954

DEZIN, A. A.

Dezin, A. A.

"On limiting problems for linear systems of equations with first-order partial derivatives." Moscow State U imeni M. V. Lomonosov. Moscow, 1956 (Dissertation for the degree of Candidate in Physico-mathematical Science)

Knizhnaya letopis'
No. 25, 1956. Moscow

Dezin, A. A. Mixed problems for certain symmetric hyperbolic systems. Dokl. Akad. Nauk SSSR (N.S.) 107 (1956), 13–16. (Russian)

Let the differential operator $A=\sum_1^n A_k D_k + A_0$ be symmetric hyperbolic [see the preceding review] and let $P \neq 0, 1$ be a constant projection such that $0=PA_kP=(1-P)A_k(1-P)$ when $k>1$. Let C be a cube with sides parallel to the coordinate planes; label them $C_k^{\pm}$ $(k=1, \cdots, n)$. Consider the boundary value problem $Au=f$ with $u=0$ on C_1^- and $PA_ku=0$ (or $(1-P)A_ku=0$) on $C_k^{\pm}$ $(k>1)$. It is shown by a direct argument similar to that of Friedrichs [Comm. Pure Appl. Math. 7 (1954), 345–392; MR 16, 44] that the problem has a unique solution. Special cases are Maxwell's equations and the linearized hydrodynamical system. *L. Gårding.*

Dezin, A.A.

SUBJECT USSR/MATHEMATICS/Differential equations CARD 1/2 PG - 897
AUTHOR DEZIN A.A.
TITLE Concerning solvable extensions of the first order linear differential operators with partial derivatives.
PERIODICAL Doklady Akad.Nauk 110, 11-14 (1956)
reviewed 6/1957

This paper is a continuation of the author's investigations on the continuations of differential operators of first order which correspond to certain mixed boundary value problems and initial value problems.

Let $Eu \overset{df}{=} \sum_{s=1}^{n} A^s(x)\,\partial u/\partial x_s + Bu$, $u=(u_1,\ldots,u_r)$, where A ,B denote $(r \times s)$-matrices. With the usual method of the Hilbert space the homogeneous boundary conditions and strong and weak continuations of the operator E which correspond to these boundary conditions are defined. The author gives the orthogonal decompositions of the $L^{2,r}(\Omega_n)$-space ($L^{2,r}(\Omega_n)$ is the space of the quadratically integrable r-components-vector fields over Ω_n), which generalize the classical decomposition into solenoidal,

potential and harmonic components. The author gives criteria for the existence of the solvable continuation of the operator E, e.g.: let the matrix A^s be symmetrical and let there exist numbers $\alpha_1, \ldots, \alpha_n$ and $\varkappa > 0$ such that for $C \stackrel{df}{=} B+B^+ - \sum \partial A / \partial x_s$ there holds the inequation $\left(\left[\sum_{s=1}^{n} \alpha_s A^s + C \right] u,u \right) \geqslant \varkappa (u,u)$.

DEZIN, A A

SUBJECT USSR/MATHEMATICS/Differential equations CARD 1/1 PG - 790
AUTHOR DEZIN A.A.
TITLE Mixed problems for some parabolic systems.
PERIODICAL Doklady Akad.Nauk 110, 503-506 (1956)
reviewed 5/1957

The present paper is a direct continuation of the author's considerations in Doklady Akad.Nauk. 107, 1 (1956) and Doklady Akad.Nauk 110, 1, (1956). For two kinds of parabolic systems (type of the heat conducting equation and type of an equation of Sobolev (Izvestija Akad.Nauk 18, 1 (1954))) the author proves the existence and uniqueness of solutions being rigorous in a certain sense. The investigation is similar to the paper of Hörmander (Acta Math. 94, 3-4, (1955)).

AUTHOR: Dezin, A.A. 20-119-3-6/65

TITLE: Symmetric Energetic Inequalities and the Mixed Problem (Simmetrichnyye energeticheskiye neravenstva i smeshannaya zadacha)

PERIODICAL: Doklady Akademii Nauk, 1958, Vol 119, Nr 3, pp 425-428 (USSR)

ABSTRACT: The author constructs the generalized solution of the mixed problem for a general hyperbolic equation of second order, the right side of which is a functional of a certain class. The coefficients of the equation depend on t. The author applies the methods developed by Garding [Ref 2] for the treatment of Cauchy's problem. On the other hand he uses the results of Sobolev [Ref 4], Lax [Ref 5] etc. The most important point of the investigation is the proof of two functional inequalities ("energetic inequalities") which here acts about the part of the dual inequalities of Garding. From these inequalities then the existence and uniqueness of the solution of the considered problem is obtained. There are 7 references, 3 of which are Soviet, 1 French, and 3 American.

Card 1/2

Symmetric Energetic Inequalities and the Mixed Problem 20-119-3-6/65

ASSOCIATION: Matematicheskiy institut imeni V.A. Steklova Akademii Nauk SSSR (Mathematical Institute imeni V.A. Steklov of the Academy of Sciences of the USSR)

PRESENTED: November 16, 1957, by S.L. Sobolev, Academician

SUBMITTED: November 12, 1957

Card 2/2